

LISTING OF CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in this application.

1. (currently amended) An intervertebral implant for implantation between adjacent vertebra, the implant having (1) with a central axis (2), the implant comprising

A) a bottom cover plate (3) and a top cover plate (4), each with an external surface (7, 8) extending transversely to the central axis (2) for contacting at least a portion of the adjacent vertebra,

B) a central part (10) ~~with a sheathing (12) that surrounds a fibre system (5)~~ provided between the cover plates (3, 4),

a fibre system, C) the fibre system being at least partially (5) is joined to with the cover plates, and (3, 4) ~~at least partially, characterised in that D) the fibre system (5) is guided over the external surfaces (7, 8) of both cover plates so that the fibre system (3, 4) and surrounds at least partially surrounds~~ the central part as well as both cover plates (3, 4), and

E) ~~the a sheathing comprising (12) comprises~~ an elastic sheathing body (25), the sheathing body at least partially surrounding ~~that surrounds~~ the central part, the sheathing body being (10) on the periphery and is made from a homogeneous material, and

wherein the fibre system is at least partially embedded within the elastic sheathing body and is passed through by the fibre system (5).

2. (currently amended) An intervertebral implant (1) according to claim 1, wherein ~~characterised in that~~ the entire fibre system is embedded in the elastic sheathing body (25).

3. (canceled)

4. (currently amended) An intervertebral implant ~~(1)~~ according to claim 1, wherein
~~3, characterised in that~~ the fibre system ~~(5)~~ has a radial thickness δ , relative to the central axis ~~(2)~~
and the sheathing body ~~(25)~~ has a radial thickness d , wherein and the δ divided by d times 100%
~~ratio~~ is in a range between 80% and 350%.

5. (currently amended) An intervertebral implant ~~(1)~~ according to claim 1, wherein
~~any one of claims 1 to 4, characterised in that~~ the fibre system ~~(5)~~ can move relative to the sheathing
body ~~(25)~~.

6. (currently amended) An intervertebral implant ~~(1)~~ according to claim 1, wherein
~~any one of claims 1 to 4, characterised in that~~ the fibre system ~~(5)~~ is so mounted so that it cannot move
relative to the sheathing body ~~(25)~~.

7. (currently amended) An intervertebral implant ~~(1)~~ according to claim 1, wherein
~~any one of claims 1 to 6, characterised in that~~ the entire fibre system ~~(5)~~ is joined with the cover plates
~~(3, 4)~~.

8. (currently amended) An intervertebral implant ~~(1)~~ according to claim 1, wherein
~~any one of claims 1 to 7, characterised in that~~ the sheathing body is made from an elastic, biocompatible
material, preferably an elastomer selected from the group consisting of, in particular based on
polyurethane, ~~or~~ silicone rubber, polyethylene, polycarbonate urethane and ~~or~~ polyethylene
terephthalate.

9. (currently amended) An intervertebral implant ~~(1)~~ according to claim 12, wherein the cavity ~~any one of claims 1 to 8, characterised in that the central part (10) is filled at least~~ partially with an incompressible medium.

10. (currently amended) An intervertebral implant ~~(1)~~ according to claim 9, wherein ~~characterised in that the incompressible medium is a liquid.~~

11. (currently amended) An intervertebral implant ~~(1)~~ according to claim 10, wherein the liquid is at least partially surround by ~~characterised in that the central part (10) comprises an incompressible liquid core (13) and an elastic formed body (9) provided around it.~~

12. (currently amended) An intervertebral implant ~~(1)~~ according to claim 1, wherein ~~any one of claims 1 to 11, characterised in that the central part (10) has a cavity (11).~~

13. (currently amended) An intervertebral implant ~~(1)~~ according to claim 1, wherein ~~any one of claims 1 to 12, characterised in that the fibre system (5) is mechanically anchored on or in the cover plates (3, 4).~~

14. (currently amended) An intervertebral implant ~~(1)~~ according to claim 1, wherein ~~any one of claims 1 to 12, characterised in that the fibre system (5) is adhered to the cover plates (3, 4).~~

15. (currently amended) An intervertebral implant ~~(1)~~ according to claim 1, wherein ~~any one of claims 1 to 12, characterised in that the central part (10) with the integrated fibre system (5) is joined with the cover plates (3, 4) in a form-locking manner.~~

16. (currently amended) An intervertebral implant (1) according to claim 1, wherein any one of claims 1 to 15, characterised in that the fibre system (5) is formed by an endless fibre, preferably in the form of a fabric or is knitted.

17. (currently amended) An intervertebral implant (1) according to claim 1, wherein the top and bottom any one of claims 1 to 16, characterised in that each cover plates include a plurality of lateral surfaces defining an outer circumference and a plurality of comprises on its periphery a lateral surface (21, 22) and grooves (18) distributed on the circumference and radially penetrating into the lateral surfaces for anchoring (21, 22) and that the fibre system (5) can be anchored in these grooves (18).

18. (currently amended) An intervertebral implant (1) according to claim 1, further comprising a plurality of any one of claims 1 to 17, characterised in that channels (19) are mortised in the external surfaces (7, 8) of the cover plates (3, 4) to accommodate the fibre system (5).

19. (currently amended) An intervertebral implant (1) according to claim 1, wherein any one of claims 1 to 18, characterised in that the fibre system (5) is formed by a woven material.

20. (currently amended) An intervertebral implant (1) according to claim 1, wherein any one of claims 1 to 19, characterised in that the central part (10) is selected from the group consisting of a essentially hollow-cylindrical, hollow-prismatic or is in the form of a body of rotation, an ellipsoid, a partial sphere or a barrel-shaped with an axis of rotation that is coaxial with the central axis (2).

21. (currently amended) An intervertebral implant (1) according to claim 19 or 20, wherein characterised in that the woven material is formed from first and second fibres (6a, 6b), and the

first fibres (6a) include an angle .alpha. with the central axis (2) and the second fibres (6b) include an angle .beta. with the central axis (2).

22. (currently amended) An intervertebral implant (1) according to claim 21, ~~wherein characterised in that~~ the first and second fibres (6a, 6b) are interwoven with one another.

23. (canceled)

24. (currently amended) An intervertebral implant (1) according to claim 21 wherein ~~any one of claims 22 to 23, characterised in that~~ the angle .alpha. is between 15.degree. and 60.degree..

25. (currently amended) An intervertebral implant (1) according to claim 21 wherein ~~any one of claims 22 to 24, characterised in that~~ the angle .beta. is between 15.degree. and 60.degree..

26. (currently amended) An intervertebral implant (1) according to ~~any one of~~ claims 11 to 25, wherein ~~characterised in that~~ the elastic formed body (9) is surrounded by a semi-permeable membrane ~~and in the interior of the elastic formed body (9) preferably physiological table salt solution is present.~~

27. (currently amended) An intervertebral implant (1) according to claim 1, wherein ~~any one of claims 1 to 26, characterised in that~~ with regard to the central axis (2) the fibre system (5) is single-layered.

28. (currently amended) An intervertebral implant (1) according to claim 1, wherein ~~any one of claims 1 to 26, characterised in that~~ with regard to the central axis (2) the fibre system (5) is multi-layered, ~~preferably 2-6 layered.~~

29. (currently amended) An intervertebral implant (1) according to claim 11, ~~wherein any one of claims 11 to 28, characterised in that~~ the fibre system (5) is wound on the elastic formed body (9).

30. (currently amended) An intervertebral implant (1) according to claim 29, ~~wherein characterised in that~~ the fibre system (5) is wound on the elastic formed body (9) in two different directions, ~~preferably rotationally symmetrically~~.

31. (currently amended) An intervertebral implant (1) according to claim 1, wherein ~~any one of claims 1 to 30, characterised in that~~ the fibre system (5) is made from UHMWPE (ultra high molecular weight polyethylene).

32. (currently amended) An intervertebral implant (1) according to claim 1, further comprising ~~any one of claims 1 to 31, characterised in that~~ a closing plate (14, 15) can be fastened on each cover plate (3, 4), the closing plate having ~~at right angles to the central axis (2)~~ an external surface (16, 17) with a macroscopic structure, ~~preferably in the form of a plurality of teeth~~ formed thereon.

33. (currently amended) An intervertebral implant (1) according to claim 1, wherein ~~any one of claims 1 to 32, characterised in that the diameter of the fibres~~ have a diameter, the diameter being in the ~~is in a range of 0.005 mm and 0.025 mm.~~

34. (new) An intervertebral implant for implantation between first and second vertebra, the implant comprising:

a top plate having an external surface sized and configured to contact at least a portion of the first vertebra and an internal surface;

a bottom plate having an external surface sized and configured to contact at least a portion of the second vertebra and an internal surface;

a central part located between the internal surfaces of the top and bottom plates, the central part including a cavity filled at least partially with a liquid material;

an elastic sheathing body, the sheathing body at least partially surrounding the central part and

a fibre system, wherein at least a portion of the fibre system is embedded in the elastic sheathing body and at least a portion of the fibre system is connected to the external surfaces of the top and bottom plates so that the fibre system at least partially surrounds the external surfaces of the top and bottom plates.

35. (new) An intervertebral implant for implantation between first and second vertebra, the implant comprising:

a top plate having an external surface sized and configured to contact at least a portion of the first vertebra and an internal surface;

a bottom plate having an external surface sized and configured to contact at least a portion of the second vertebra and an internal surface;

a central part located between the internal surfaces of the top and bottom plates;

an elastic sheathing body, the sheathing body at least partially surrounding the central part; and

a fibre system, wherein at least a portion of the fibre system is embedded in the elastic sheathing body and at least a portion of the fibre system is connected to the external surfaces of the top and bottom plates so that the fibre system at least partially surrounds the external surfaces of the top and bottom plates and

wherein the fibre system includes a plurality of interwoven fibres and the external surfaces of the top and bottom plates includes a plurality of grooves formed therein for receiving the fibre system.